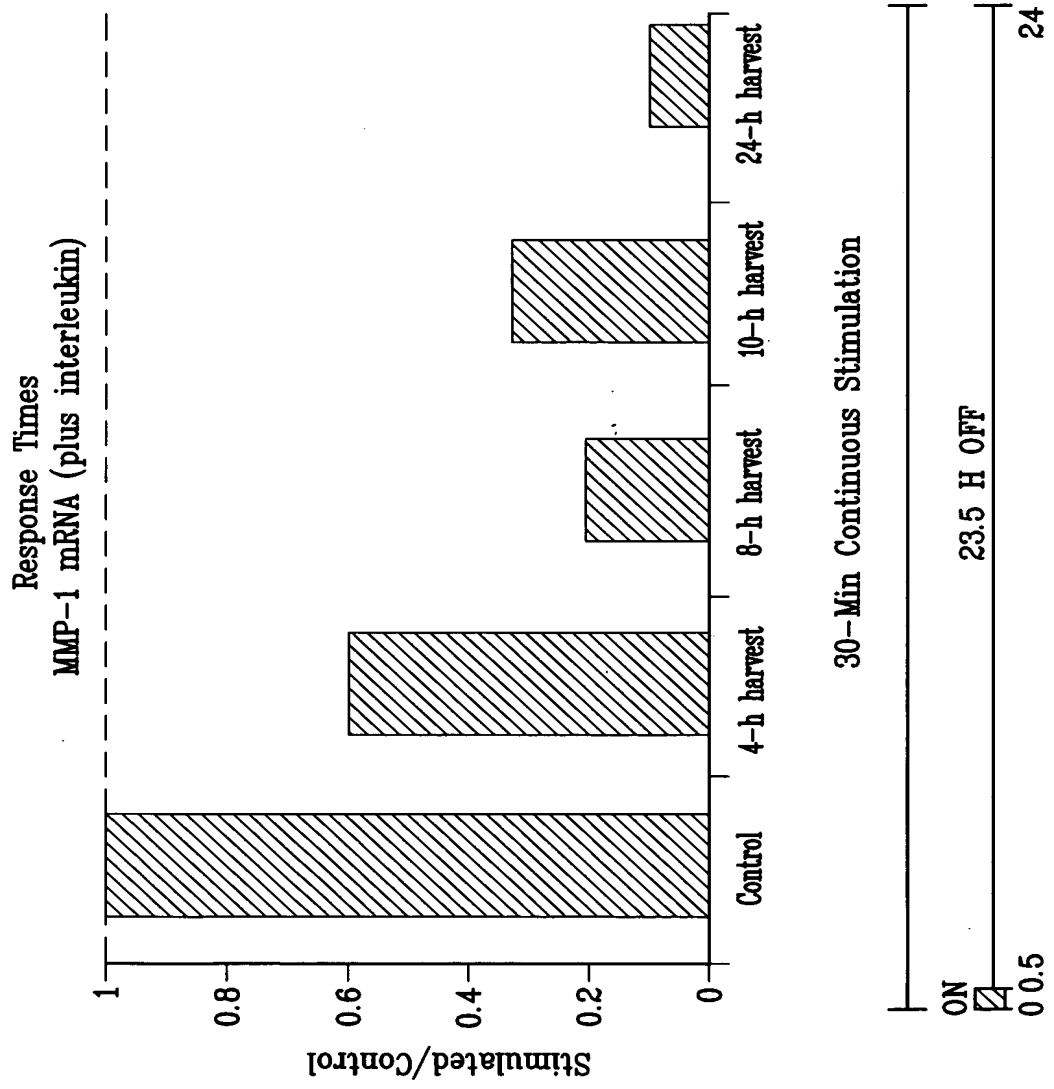
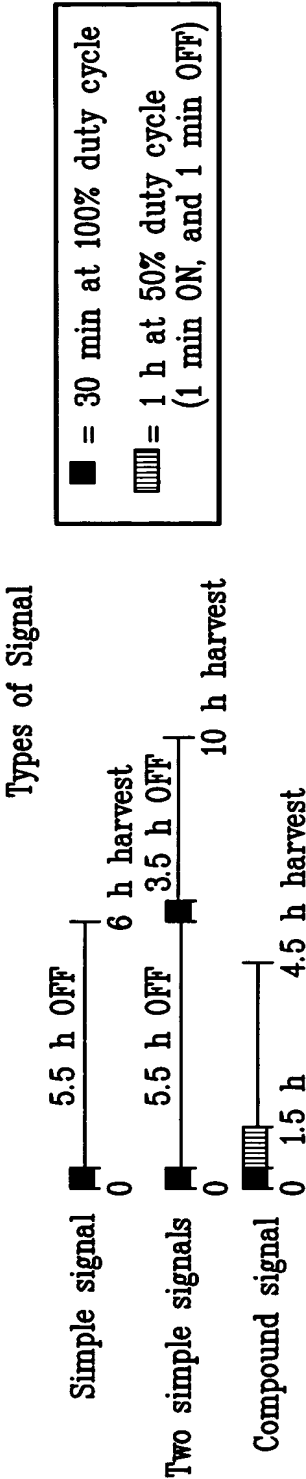
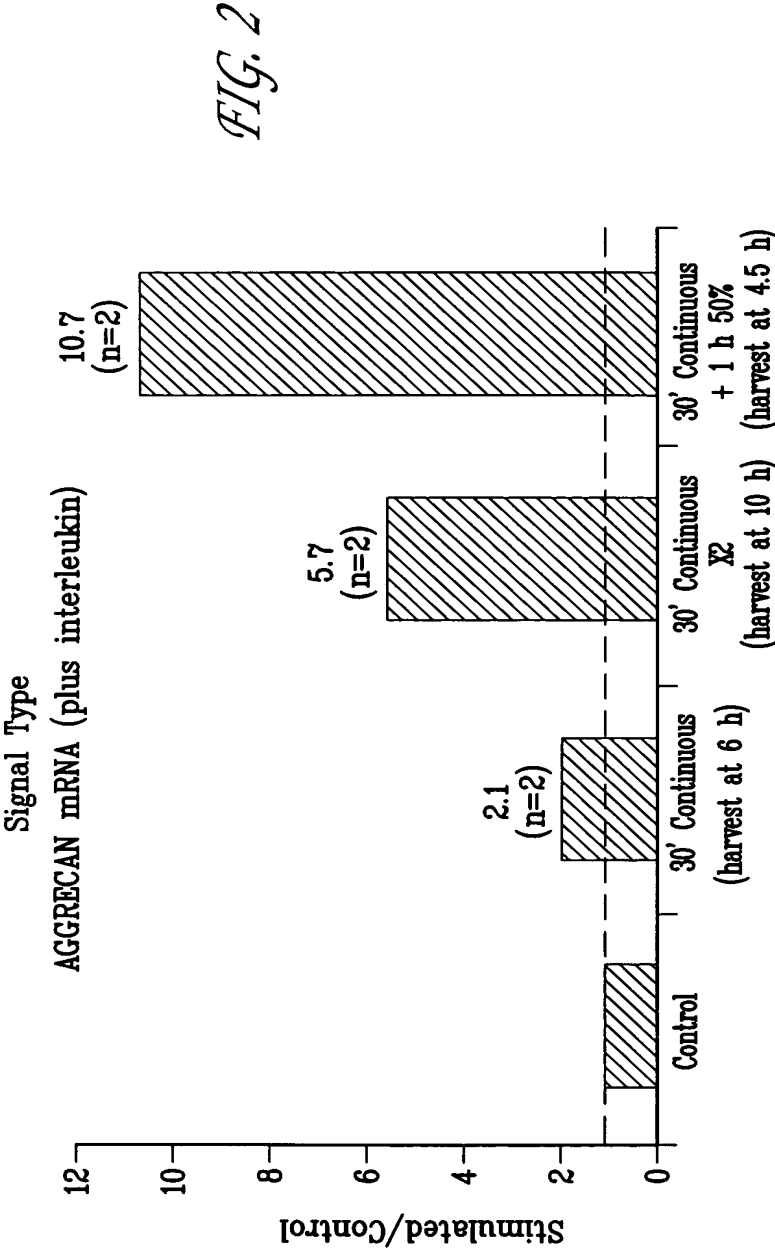


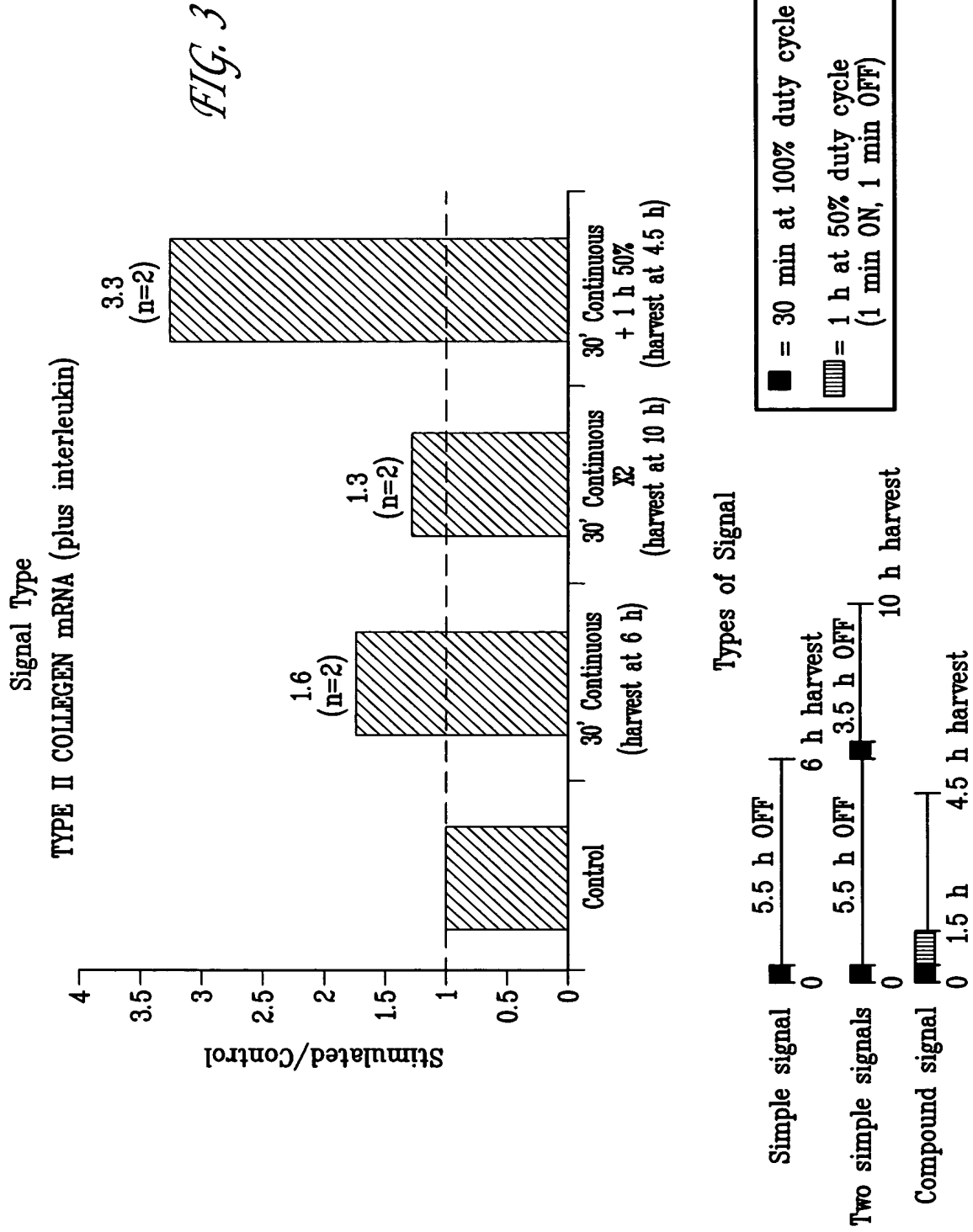


FIG. 1



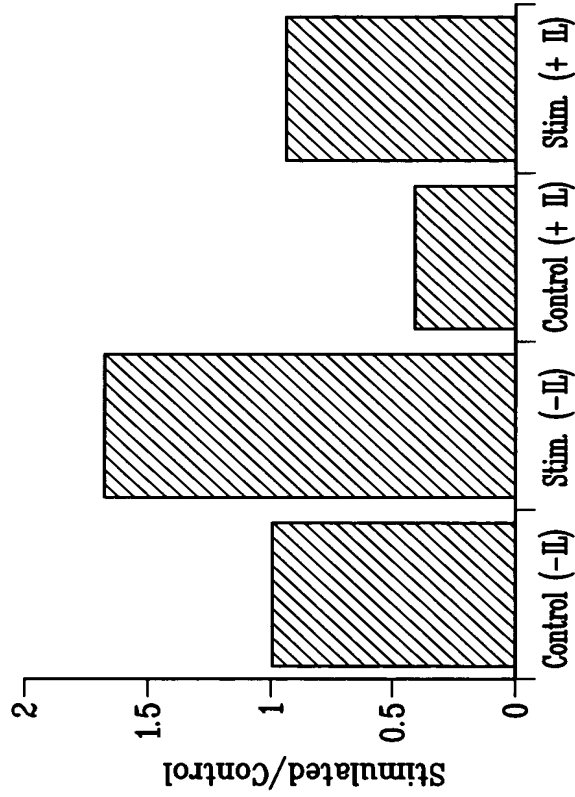


3/12



4/12

HEXOSAMINE PRODUCTION  
 With and without electrical stimulation (Stim.)  
 With and without interleukin (IL)



Compound signal (30-min 100%/1-H 50% duty cycle)  
 Followed by simple signal (1-H 50% duty cycle) 4.5 h later



▨ = 50% duty cycle  
 (1 min ON, 1 min OFF)  
 ■ = 30 min continuous

FIG. 4

5/12

**HYDROXYPROLINE PRODUCTION**  
 With and without electrical stimulation (Stim.)  
 With and without interleukin (IL)

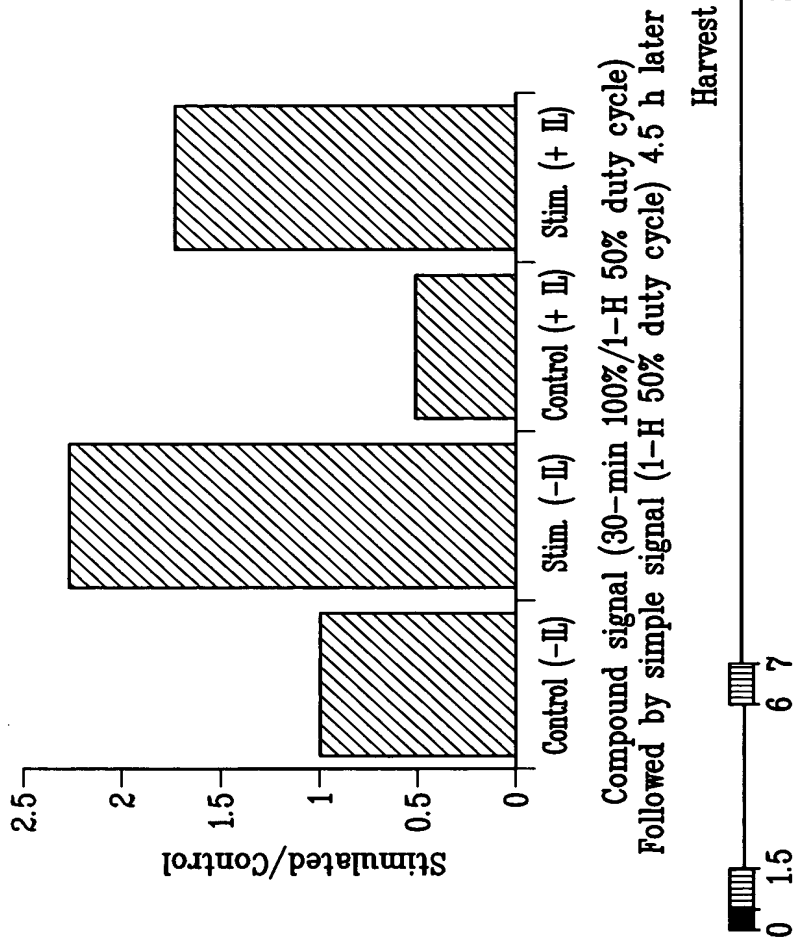
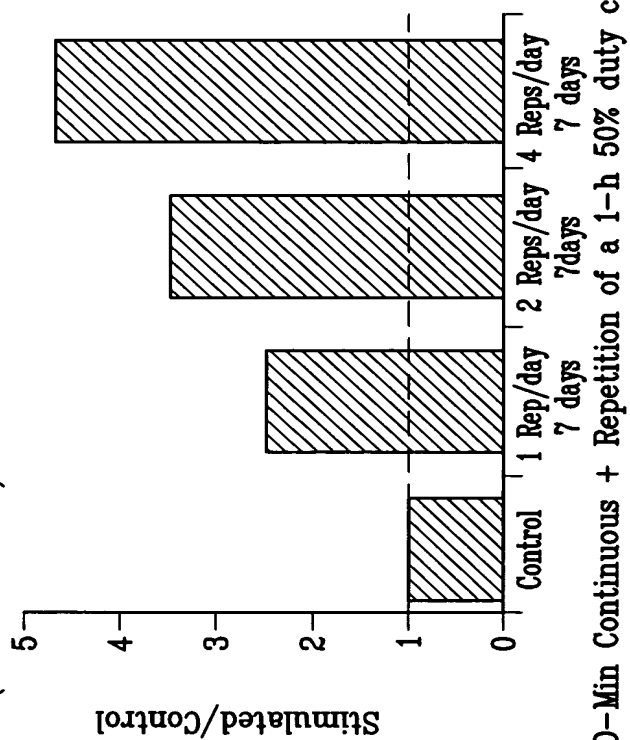
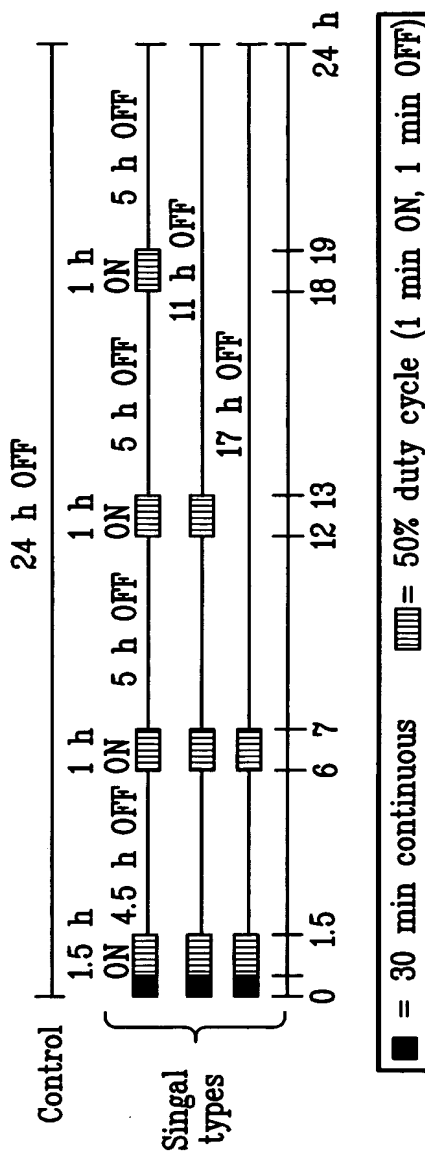


FIG. 6

### HEXOSAMINE (PROTEOGLYCAN) INCREASES AFTER VARIOUS SIGNAL TYPES

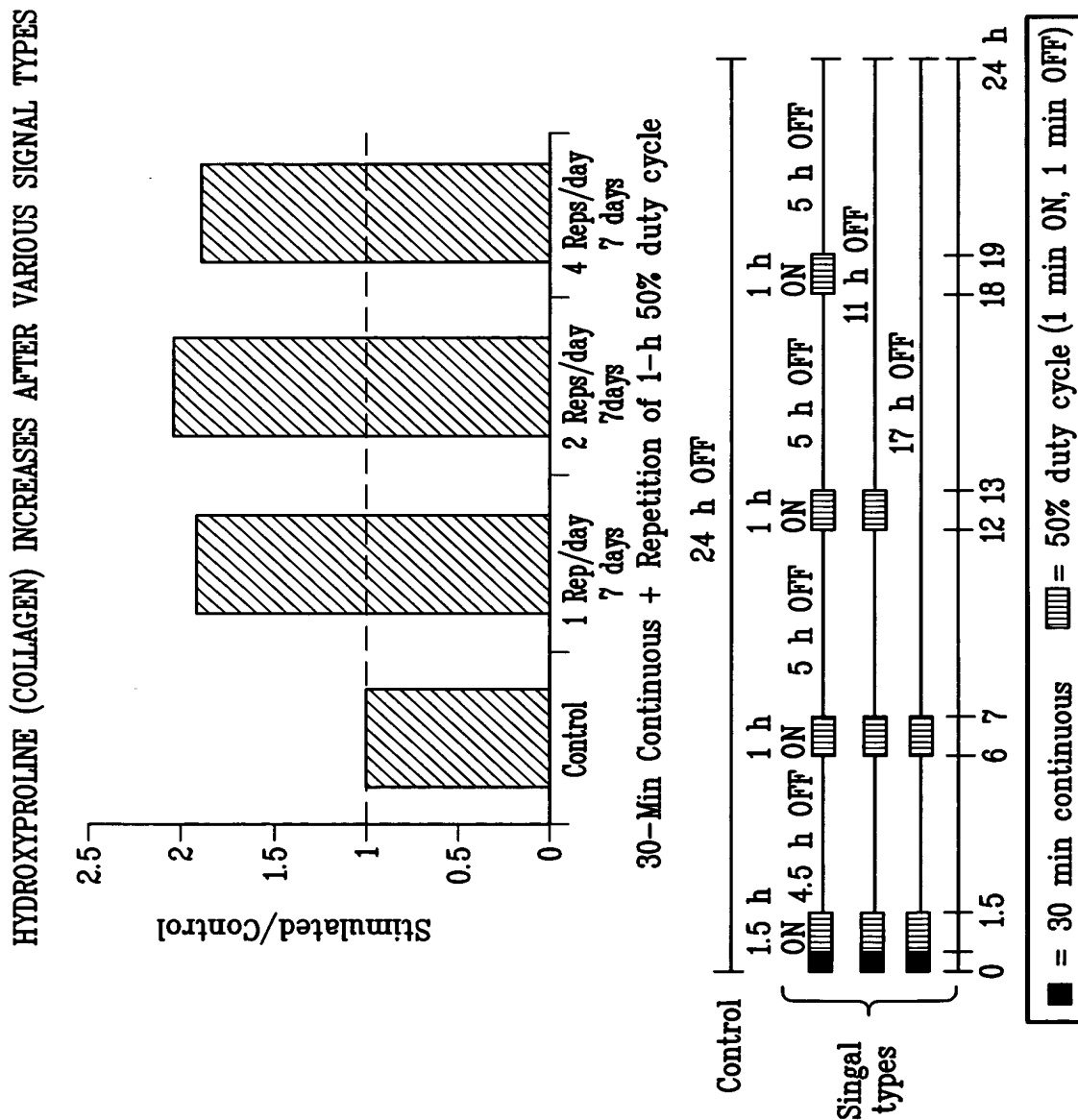


### 0-Min Continuous + Repetition of a 1-h 50% duty cycle



■ = 30 min continuous    ▨ = 50% duty cycle (1 min ON, 1 min OFF)

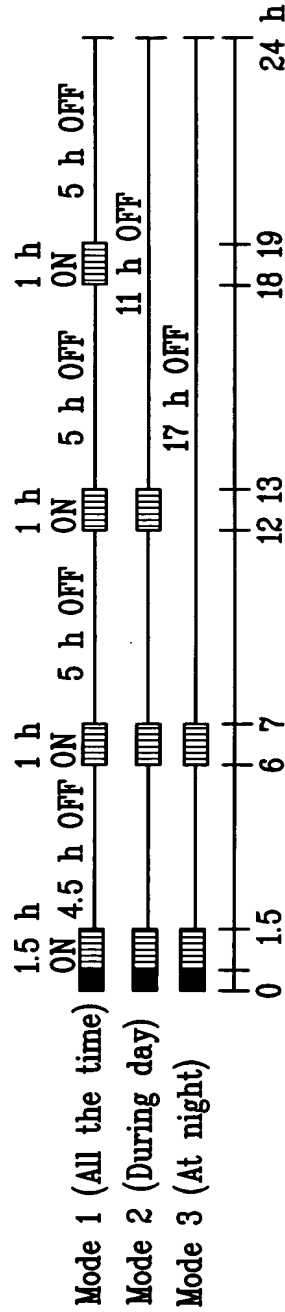
FIG. 7



8/12

FIG. 8

DEVICE SIGNAL MODES

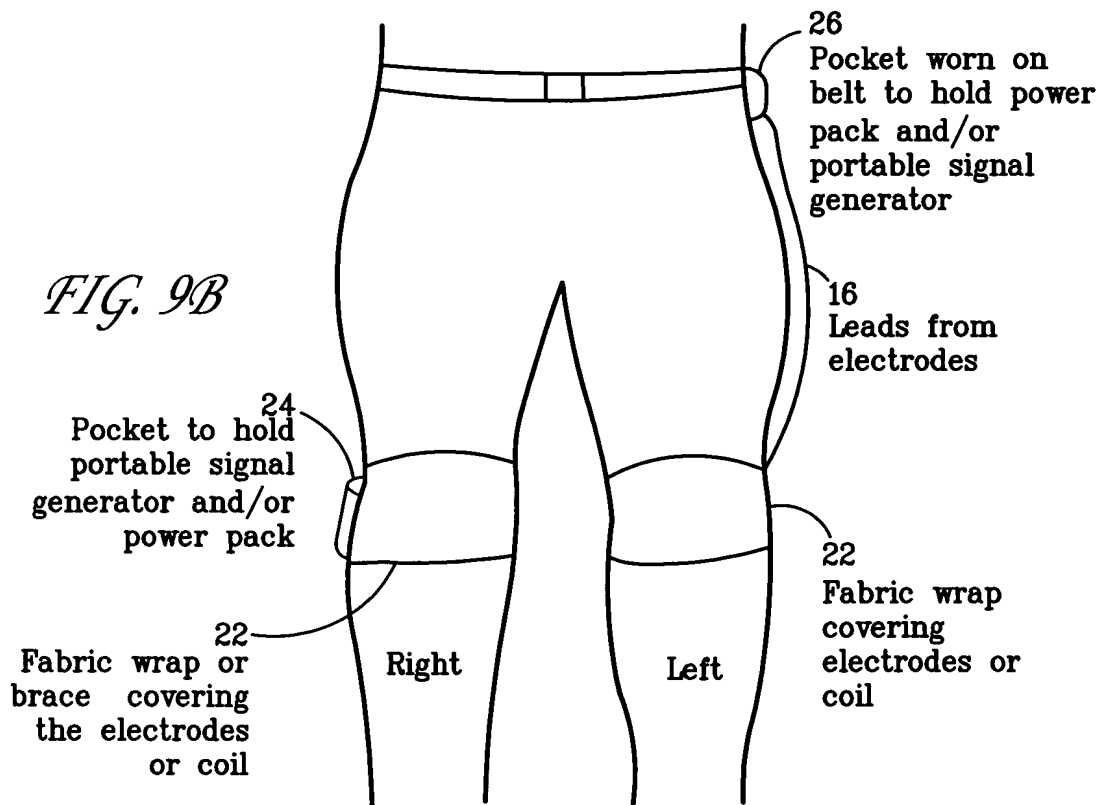
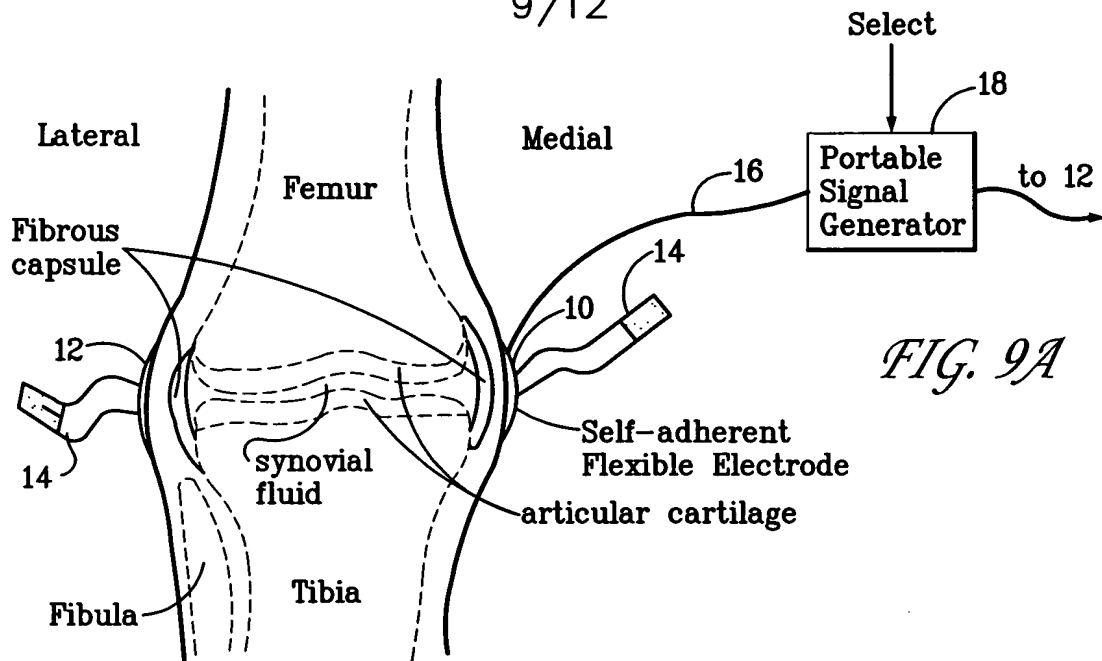


■ = 30 min continuous, 60 kHz sine wave, 4.6 V<sub>p-p</sub> to 7.6 V<sub>p-p</sub>

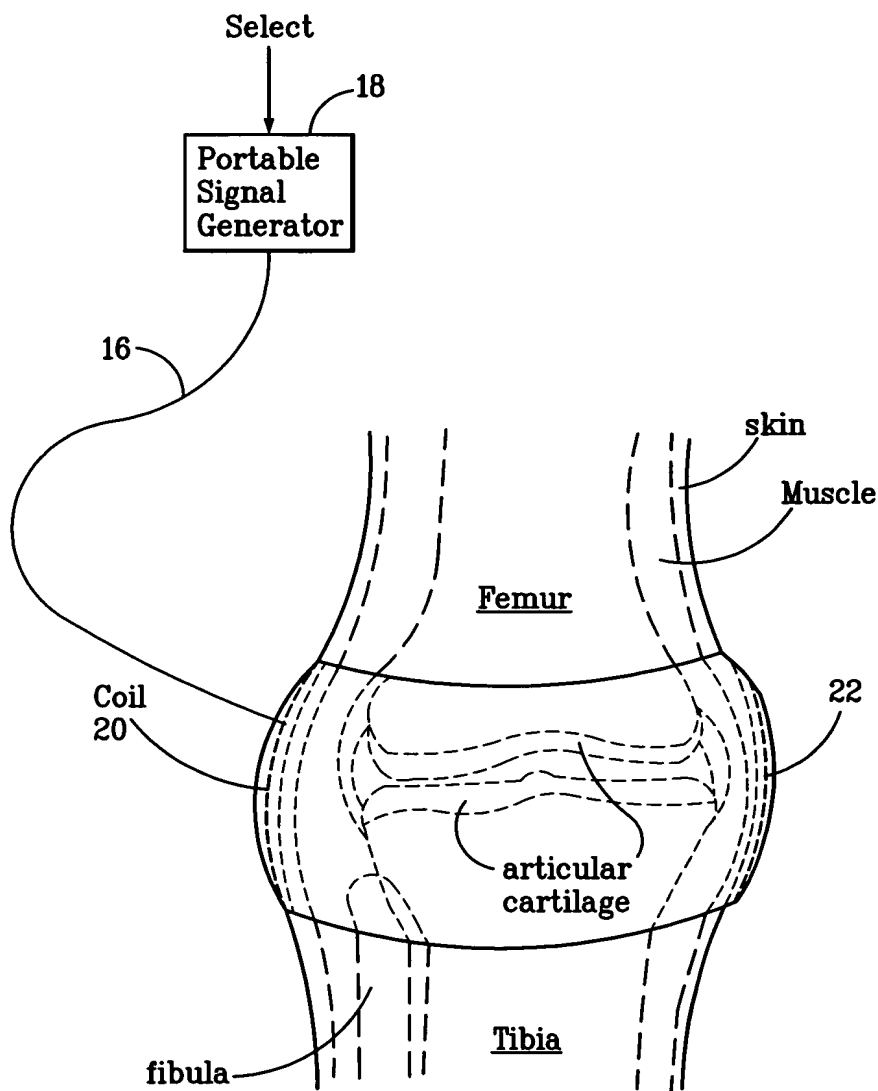
||||| = 50% duty cycle (1 min ON, 1 min OFF), 60 kHz wave, 4.6 V<sub>p-p</sub> to 7.6 V<sub>p-p</sub>



9/12



10/12



*FIG. 9C*

11/12

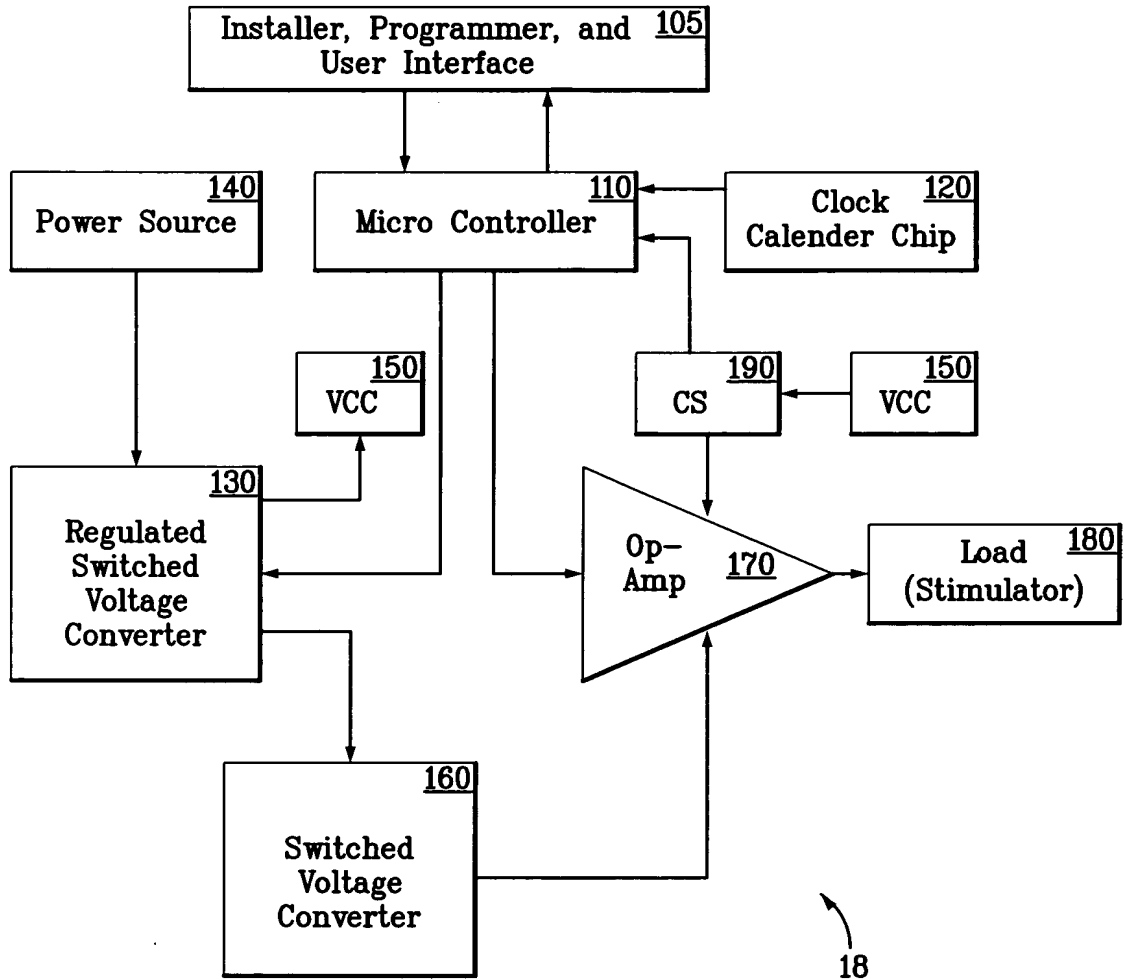


FIG. 10

12/12

